Archives of Virology

Edited by
D. R. Lowy, Bethesda, Md.
E. Norrby, Stockholm
C. Scholtissek, Giessen
A. Sugiura, Tokyo
D. A. J. Tyrrell, Salisbury
J. Vilček, New York, N.Y. (Editor-in-Chief)

Vol. 76, 1983
ISSN 0304-8608

Springer-Verlag
Wien New York

Archives of Virology

Advisory Board

J. D. Almeida, Beckenham, Kent
J. W. Almond, Leicester
D. H. L. Bishop, Birmingham, Ala.
C. Chany, Paris
C. M. Chu, Beijing
E. De Clercq, Leuven
F. Deinhardt, München
H. J. Eggers, Köln
E. Fanning, München
B. N. Fields, Boston, Mass.
B. Fleckenstein, Erlangen
Y. Ghendon, Moscow
O. Haller, Zürich
H. zur Hausen, Freiburg i. Br.
E. A. Havell, Saranac Lake, N. Y.
W. K. Joklik, Durham, N. C.
D. W. Kingsbury, Memphis, Tenn.
H.-D. Klenk, Giessen
F. Lehmann-Grube, Hamburg
H. L. Lipton, Chicago, Ill.
B. Lomniczi, Budapest
D. K. Lvov, Moscow
D. J. McGeoch, Glasgow
M. R. Macnaughton, Slough, Berks.
B. W. J. Mahy, Cambridge
V. ter Meulen, Würzburg
C. A. Mims, London
L. Montagnier, Paris
R. Mori, Fukuoka
F. A. Murphy, Fort Collins, Colo.
S. Patterson, Harrow
U. Pettersson, Uppsala
W. Plowright, Compton, Berks.
C. R. Pringle, Glasgow
A. Scheid, New York, N. Y.
R. E. Shope, New Haven, Conn.
D. I. H. Simpson, Salisbury, Wilts.
J. Svoboda, Praha
D. L. Walker, Madison, Wis.
A. P. Waterson, London
E. Wimmer, Stony Brook, N. Y.
H. A. Wood, Ithaca, N. Y.
J. Závada, Bratislava

Editorial Assistant: W. Tuma, Wien

The exclusive copyright for all languages and countries, including the right for photomechanical and any other reproductions including microform is transferred to the publisher.

© 1983 by Springer-Verlag / Wien

Contents: Vol. 76

No. 1

Brief Review

Inglot, Anna D.: The Hormonal Concept of Interferon 1

Original Papers

Joassin, L., Reginster, Monique, Vaira, Dolorès: Anti M-Protein Antibody Response to Type A or B Natural Influenza Detected by Solid Phase Enzyme Linked Immunosorbent Assay and by Complement Fixation 15

Olofsson, S., Norrild, Bodil, Andersen, Åse B., Pereira, Leonore, Jeansson, S., Lycke, E.: Populations of Herpes Simplex Virus Glycoprotein gC with and without Affinity for the N-Acetyl-Galactosamine Specific Lectin of *Helix pomatia* 25

Gordon, Y., Gilden, D. H., Shtram, Y., Asher, Y., Tabor, E., Wellish, M., Devlin, M., Snipper, D., Hadar, J., Becker, Y.: A Low Thymidine Kinase-Producing Mutant of Herpes Simplex Virus Type 1 Causes Latent Trigeminal Ganglia Infections in Mice 39

Liprandi, F., Walder, R.: Replication of Virulent and Attenuated Strains of Yellow Fever Virus in Human Monocytes and Macrophage-Like Cells (U 937) 51

Brief Reports

von Hoyningen-Huene, V., Scholtissek, C.: Low Genetic Mixing Between Avian Influenza Viruses of Different Geographic Regions 63

Bardell, D.: Leakage of Cellular Enzyme During Replication of Oncogenic and Nononcogenic Adenoviruses 69

No. 2

Brief Review

Wardley, R. C., de M. Andrade, C., Black, D. N., de Castro Portugal, F. L., Enjuanes, L., Hess, W. R., Mebus, C., Ordas, A., Rutili, D., Sanchez Vizcaino, J., Vigario, J. D., Wilkinson, P. J., with contributions from **Moura Nunes, J. F., Thomson, G.:** African Swine Fever Virus 73

Original Papers

Kida, H., Webster, R. G., Yanagawa, R.: Inhibition of Virus-Induced Hemolysis with Monoclonal Antibodies to Different Antigenic Areas on the Hemagglutinin Molecule of A/Seal/Massachusetts/1/80 (H7N7) Influenza Virus 91

Reavy, B., Moore, N. F.: Cell-Free Translation of *Drosophila* C Virus RNA: Identification of a Virus Protease Activity Involved in Capsid Protein Synthesis and Further Studies on *in vitro* Processing of Cricket Paralysis Virus Specified Proteins 101

Dawe, P. S., King, A. M. Q.: Point Mutations in Polypeptide VP1 of Foot-and-Mouth Disease Virus Affect Mouse Virulence and BHK21 Cell Pathogenicity 117

Arnheiter, H., Staeheli, P.: Expression of Interferon Dependent Resistance to Influenza Virus in Mouse Embryo Cells 127

Brief Reports

Clewley, J. P., Norton, J. D., Avery, R. J.: Biochemical Characterization of a Deleted Kirsten Sarcoma Virus Genome 139

Hoshi, S., Mikami, T., Nagata, K., Onuma, M., Izawa, H.: Monoclonal Antibodies Against a Paramyxovirus Isolated from Japanese Sparrow-Hawks *(Accipiter virugatus gularis)* 145

Pfeiffer, G., Willutzki, D., Weder, D., Becker, B., Radsak, K.: Microtubular Reaction in Human Fibroblasts Infected by Cytomegalovirus 153

Announcement 161

No. 3

Brief Review

Norrby, E.: Viral Vaccines: The Use of Currently Available Products and Future Developments 163

Original Papers

Fennestad, K. L., MacNaughton, M. R.: Pleural Effusion Disease in Rabbits. Properties of the Aetiological Agent 179

Bruggeman, C. A., Debie, W. M. H., Grauls, G., Majoor, G., van Boven, C. P. A.: Infection of Laboratory Rats with a New Cytomegalo-Like Virus 189

Cosby, S. L., Morrison, J., Rima, B. K., Martin, S. J.: An Immunological Study of Infection of Hamsters with Large and Small Plaque Canine Distemper Viruses 201

Moe, Kyaw, Harper, G. J.: The Effect of Relative Humidity and Temperature on the Survival of Bovine Rotavirus in Aerosol 211

Annuar, B. O., Mackenzie, J. S., Lalor, P. A.: Isolation and Characterization of Avipoxviruses from Wild Birds in Western Australia 217

Tsiang, H., Derer, M., Taxi, J.: An *in vivo* and *in vitro* Study of Rabies Virus Infection of the Rat Superior Cervical Ganglia 231

Nagata, M., Tanada, Y.: Origin of an Alkaline Protease Associated with the Capsule of a Granulosis Virus of the Armyworm, *Pseudaletia unipuncta* (Haworth) 245

Brief Reports

Evermann, J. F., Smith, A. W., Skilling, D. E., McKeirnan, A. J.: Ultrastructure of Newly Recognized Caliciviruses of the Dog and Mink 257

Gregoriades, A., Markarian, K.: Anomalous Electrophoretic Behavior of the Membrane (M) Protein of Influenza Virus in Polyacrylamide Gels 263

Forghani, B., Schmidt, Nathalie J.: Association of Herpes Simplex Virus with Platelets of Experimentally Infected Mice 269

No. 4

Brief Review

Assaad, F. A., Schild, G. C.: The WHO Programme for Prevention and Control of Viral, Chlamydial, and Rickettsial Diseases 275

Original Papers

Rombaut, B., Vrijsen, R., Boeyé, A.: Epitope Evolution in Poliovirus Maturation 289

Takashima, I., Hashimoto, N., Arikawa, J., Matsumoto, K.: Getah Virus in *Aedes vexans nipponii* and *Culex tritaeniorhynchus:* Vector Susceptibility and Ability to Transmit 299

Wigand, R., Gelderblom, H., Özel, M., Distler, H., Adrian, Th.: Characteristics of Mastadenovirus h8, the Causative Agent of Epidemic Keratoconjunctivitis 307

Diabaté, S., Geyer, R., Stirm, S.: Separation and Sugar Component Analysis of the Oligosaccharides in the Surface Glycoproteins of Newcastle Disease Virus 321

Coria, M. F., Schmerr, M. J. F., McClurkin, A. W.: Characterization of the Major Structural Proteins of Purified Bovine Viral Diarrhea Virus 335

Misra, Vikram, Babiuk, L. A., le Q. Darcel, C.: Analysis of Bovine Herpes Virus-Type 1 Isolates by Restriction Endonuclease Fingerprinting 341

Brief Reports

Hoshino, S., Imanishi, J., Matsuoka, H., Kishida, T.: The Production of Interferon-α and -β by Cloned Human Lymphoblastoid Cells 355

Spring, Susan B., Tolpin, M. D.: Enzymatic Cleavage of a Glycoprotein of Respiratory Syncytial Virus 359

Stebbing, N., Weck, P. K., Fenno, J. T., Estell, D. A., Rinderknecht, E.: Antiviral Effects of Bacteria-Derived Human Leukocyte Interferons Against Encephalomyocarditis Virus Infection of Squirrel Monkeys 365

Rapp, U. R., Barbacid, M.: Activation of a Type C Virus Particle in Cells from the Inbred Mouse Strain 129/J: Antigenic Relationship with the Horizontally Transmitted Type C Viruses of Primates 373

Listed in Current Contents

Author Index

Adrian, Th. s. Wigand, R.
Andersen, Åse B. s. Olofssen, S.
de M. Andrade, C. s. Wardley, R. C.
Annuar, B. O., Mackenzie, J. S., Lalor, P. A.: Isolation and Characterization of Avipoxviruses from Wild Birds in Western Australia. 217.
Arikawa, J. s. Takashima, I.
Arnheiter, H., Staeheli, P.: Expression of Interferon Dependent Resistance to Influenza Virus in Mouse Embryo Cells. 127.
Asher, Y. s. Gordon, Y.
Assaad, F. A., Schild, G. C.: The WHO Programme for Prevention and Control of Viral, Chlamydial and Rickettsial Diseases (Brief Review). 275.
Avery, R. J. s. Clewley, J. P.

Babiuk, L. A. s. Misra, Vikram
Barbacid, M. s. Rapp, U. R.
Bardell, D.: Leakage of Cellular Enzyme During Replication of Oncogenic and Nononcogenic Adenoviruses (Brief Report). 69.
Becker, B. s. Pfeiffer, G.
Becker, Y. s. Gordon, Y.
Black, D. N. s. Wardley, R. C.
Boeyé, A. s. Rombaut, B.
van Boven, C. P. A. s. Bruggeman, C. A.
Bruggeman, C. A., Debie, W. M. H., Grauls, G., Majoor, G., van Boven, C. P. A.: Infection of Laboratory Rats with New Cytomegalo-Like Virus. 189.

de Castro Portugal, F. L. s. Wardley, R. C.
Clewley, J. P., Norton, J. D., Avery, R. J.: Biochemical Characterization of a Deleted Kirsten Sarcoma Virus Genome (Brief Report). 139.
Coria, M. F., Schmerr, M. J. F., McClurkin, A. W.: Characterization of the Major Structural Proteins of Purified Bovine Viral Diarrhea Virus. 335.
Cosby, S. L., Morrison, J., Rima, B. K., Martin, S. J.: An Immunological Study of Infection of Hamsters with Large and Small Plaque Canine Distemper Viruses. 201.

Darcel, C. Le Q. s. Misra, Vikram
Dawe, P. S., King, A. M. Q.: Point Mutations in Polypeptide VP1 of Foot-and-Mouth Disease Virus Affect Mouse Virulence and BHK21 Cell Pathogenicity. 117.
Debie, W. M. H. s. Bruggeman, C. A.
Derer, M. s. Tsiang, H.
Devlin, M. s. Gordon, Y.
Diabaté, S., Geyer, R., Stirm, S.: Separation and Sugar Component Analysis of the Oligosaccharides in the Surface Glycoproteins of Newcastle Disease Virus. 321.
Distler, H. s. Wigand, R.

Enjuanes, L. s. Wardley, R. C.
Estell, D. A. s. Stebbing, N.
Evermann, J. F., Smith, A. W., Skilling, D. E., McKeirnan, A. J.: Ultrastructure of Newly Recognized Caliciviruses of the Dog and Mink (Brief Report). 257.

Fennestad, K. L., MacNaughton, M. R.: Pleural Effusion Disease in Rabbits. Properties of the Aetiological Agent. 179.
Fenno, J. T. s. Stebbing, N.
Forghani, B., Schmidt, Nathalie J.: Association of Herpes Simplex Virus with Platelets of Experimentally Infected Mice (Brief Report). 269.

Gelderblom, H. s. Wigand, R.
Geyer, R. s. Diabate, S.
Gilden, D. H. s. Gordon, Y.
Gordon, Y., Gilden, D. H., Shtram, Y., Asher, Y., Tabor, E., Wellish, M., Devlin, M., Snipper, D., Hadar, J., Becker, Y.: A Low Thymidine Kinase-Producing Mutant of Herpes Simplex Virus Type 1 Causes Latent Trigeminal Ganglia Infections in Mice. 39.
Grauls, G. s. Bruggeman, C. A.
Gregoriades, A., Markarian, K.: Anomalous Electrophoretic Behaviour of the Membrane (M) Proteine of Influenza Virus in Polyacrylamide Gels (Brief Report). 263.

Hadar, J. s. Gordon, Y.
Harper, G. J. s. Moe, Kyaw.
Hashimoto, N. s. Takashima, I.
Hess, W. R. s. Wardley, R. C.
Hoshi, S., Mikami, T., Nagata, K., Onuma, M., Izawa, H.: Monoclonal Antibodies Against a Paramyxovirus Isolated from Japanese Sparrow-Hawks *(Accipiter virugatus gularis)* (Brief Report). 145.
Hoshino, S., Imanishi, J., Matsuoka, H., Kishida, T.: The Production of Interferon-α and -β by Cloned Human Lymphoblastoid Cells (Brief Report). 355.

von Hoyningen-Huene, V., Scholtissek, C.: Low Genetic Mixing Between Avian Influenza Viruses of Different Geographic Regions (Brief Report). 63.

Imanishi, J. s. Hoshino, S.
Inglot, Anna, D.: The Hormonal Concept of Interferon (Brief Review). 1.
Izawa, H. s. Hoshi, S.

Jeansson, S. s. Olofsson, S.
Joassin, L., Reginster, Monique, Vaira, Dolores: Anti M-Protein Antibody Response to Type A or B Natural Influenza Detected by Solid Phase Enzyme Linked Immunosorbent Assay and by Complement Fixation. 15.

Kida, H., Webster, R. G., Yanagawa, R.: Inhibition of Virus-Induced Hemolysis with Monoclonal Antibodies to Different Antigenic Areas on the Hemagglutinin Molecule of A/Seal/Massachusetts/1/80 (H7N7) Influenza Virus. 91.
King, A. M. Q. s. Dawe, P. S.
Kishida, T. s. Hoshino, S.

Lalor, P. A., s. Annuar, B. O.
Liprandi, F., Walder, R.: Replication of Virulent and Attenuated Strains of Yellow Fever Virus in Human Monocytes and Macrophage-Like Cells (U937). 51.
Lycke, E. s. Olofsson, S.

Mackenzie, J. S. s. Annuar, B. O.
MacNaughton, M. R. s. Fennestad, K. L.
Majoor, G. s. Bruggeman, C. A.
Markarian, K. s. Gregoriades, A.
Martin, S. J. s. Cosby, S. L.
Matsumoto, K. s. Takashima, I.
Matsuoka, H. s. Hoshino, S.
McClurkin, A. W. s. Coria, M. F.
McKeirnan, A. J. s. Evermann, J. F.
Mebus, C. s. Wardley, R. C.
Mikami, T. s. Hoshi, S.
Misra, Vikram, Babiuk, L. A., Darcel, C. Le Q:. Analysis of Bovine Herpes Virus-Type 1 Isolates by Restriction Endonuclease Fingerprinting. 341.
Moe, Kyaw, Harper, G. J.: The Effect of Relative Humidity and Temperature on the Survival of Bovine Rotavirus in Aerosol. 211.
Moore, N. F. s. Reavy, B.
Morrison, J. s. Cosby, S. L.
Moura Nunes, J. F. s. Wardley, R. C.

Nagata, K. s. Hoshi, S.
Nagata, M., Tanada, Y.: Origin of an Alkaline Protease Associated with the Capsule of a Granulosis Virus of the Armyworm, *Pseudaletia unipuncta* (Haworth). 245.
Norrby, E.: Viral Vaccines: The Use of Currently Available Products and Future Developments (Brief Review). 163.
Norrild, Bodil s. Olofsson, S.
Norton, J. D. s. Clewley, J. P.

Özel, M. s. Wigand, R.
Olofsson, S., Norrild, Bodil, Andersen, Åse B., Pereira, Leonore, Jeansson, S., Lycke, E.: Populations of Herpes Simplex Virus Glycoprotein gC with and without Affinity for the N-Acetyl-Galactosamine Specific Lectin of *Helix pomatia*. 25.
Onuma, M. s. Hoshi, S.
Ordas, A. s. Wardley, R. C.

Pereira, Leonore s. Olofsson, S.
Pfeiffer, G., Willutzki, D., Weder, D., Becker, B., Radsak, K.: Microtubular Reaction in Human Fibroblasts Infected by Cytomegalovirus (Brief Report). 153.

Radsak, K. s. Pfeiffer, G.
Rapp, U. R., Barbacid, M.: Activation of a Type C Virus Particle in Cells from the Inbred Mouse Strain 129/J: Antigenic Relationship with the Horizontally Transmitted Type C Viruses of Primates (Brief Report). 373.
Reavy, B., Moore, N. F.: Cell-Free Translation of *Drosophila* C Virus RNA: Identification of a Virus Protease Activity Involved in Capsid Protein Synthesis and Further Studies on in vitro Processing of Cricket Paralysis Virus Specified Proteins. 101.
Reginster, Monique s. Joassin, L.
Rima, B. K. s. Cosby, S. L.
Rinderknecht, E. s. Stebbing, N.
Rombaut, B., Vrijsen, R., Boeyé, A.: Epitope Evolution in Poliovirus Maturation. 289.
Rutili, D. s. Wardley, R. C.

Sanchez Vizcaino, J. s. Wardley, R. C.
Schild, G. C. s. Assaad, F. A.
Schmerr, M. J. F. s. Coria, M. F.
Schmidt, Nathalie J. s. Forghani, B.
Scholtissek, C. s. von Hoyningen-Huene, V.
Shtram, Y. s. Gordon, Y.
Skilling, D. E. s. Evermann, J. F.
Smith, A. W. s. Evermann, J. F.
Snipper, D. s. Gordon, Y.

Spring, Susan B., Tolpin, M. D.: Enzymatic Cleavage of a Glycoprotein of Respiratory Syncytial Virus. 359.
Staeheli, P. s. Arnheiter, H.
Stebbing, N., Weck, P. K., Fenno, J. T., Estell, D. A., Rinderknecht, E.: Antiviral Effects of Bacteria-Derived Human Leukocyte Interferons Against Encephalomyocarditis Virus Infection of Squirrel Monkeys (Brief Report). 365.
Stirm, S. s. Diabaté, S.

Tabor, E. s. Gordon, Y.
Takashima, I., Hashimoto, N., Arikawa, J., Matsumoto, K.: Getah Virus in *Aedes vexans nipponii* and *Culex tritaeniorhynchus*: Vector Susceptibility and Ability to Transmit. 299.
Tanada, Y. s. Nagata, M.
Taxi, J. s. Tsiang, H.
Thomson, G. s. Wardley, R. C.
Tolpin, M. D. s. Spring, Susan B.
Tsiang, H., Derer, M., Taxi, J.: An *in vivo* and *in vitro* Study of Rabies Virus Infection of the Rat Superior Cervical Ganglia. 231.
Vaira, Dolores s. Joassin, L.
Vigario, J. D. s. Wardley, R. C.
Vrijsen, R. s. Rombaut, B.

Walder, R. s. Liprandi, F.
Wardley, R. C., de M. Andrade, C., Black, D. N., de Castro Portugal, F. L., Enjuanes, L., Hess, W. R., Mebus, C., Ordas, A., Rutili, D., Sanchez Vizcaino, J., Vigario, J. D., Wilkinson, P. J., with contributions from Moura Nunes, J. F., Thomson, G.: African Swine Fever Virus (Brief Review). 73.
Weck, P. K. s. Stebbing, N.
Webster, R. G. s. Kida, H.
Weder, D. s. Pfeiffer, G.
Wellish, M. s. Gordon, Y.
Wigand, R., Gelderblom, H., Özel, M., Distler, H., Adrian, Th.: Characteristics of Mastadenovirus h8, the Causative Agent of Epidemic Keratoconjunctivitis. 307.
Wilkinson, P. J. s. Wardley, R. C.
Willutzki, D. s. Pfeiffer, G.

Yanagawa, R. s. Kida, H.